National Biological Information Infrastructure

www.nbii.gov

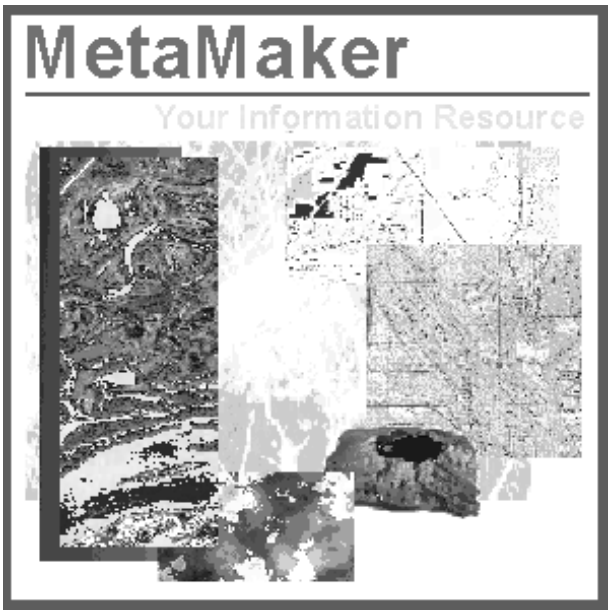
MetaMaker: The NBII Metadata Data Entry Tool

Metadata—data elements that describe other data—serve as the card catalog in the National Biological Information Infrastructure (NBII) library of the Nation's biological data and information. Metadata, in fact, are the linchpin of the NBII Clearinghouse since they make it possible for users to search, retrieve, and integrate information from the NBII's vast network of biological databases.

To function properly, metadata must be consistent, standardized descriptions of data content, quality, lineage, condition, and other characteristics. The NBII Program has developed a biological "profile" of the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata that can be used for documenting biological resources data and information of all types (see http://www.nbii.gov/current.status.html).

To further assist participants in the NBII federation with the preparation and management of standardized metadata, the NBII Program has developed a metadata data entry program called "MetaMaker." MetaMaker is a PC-based software tool that makes it possible for users to enter metadata in compliance with the FGDC geospatial metadata standard and the NBII biological profile.

MetaMaker uses a series of data entry screens to help users more easily prepare metadata on their databases or information products. The program includes all the sections and elements of the FGDC geospatial metadata standard as well as all the elements of the NBII biological profile of the FGDC standard.



MetaMaker can be used to collect metadata for *biological* data and information of all types. This includes explicitly geospatial biological data; biological data that are not explicitly geospatial (such as those resulting from *in vitro* research); and biological information (such as research publications, bibliographies, or lists of experts). MetaMaker can also be used to collect FGDC-compliant metadata for *non-biological* geospatial data. In addition, the program provides capabilities for printing reports and for connecting to systems capable of serving the metadata on the Internet, for example, as part of the NSDI/NBII Clearinghouse network.

MetaMaker was developed using Microsoft Access, a PC-based database management system. Because a stand-alone version of Access is generated directly from the MetaMaker program, the user is not required to own a copy of Access to run

NBII National Program Office
U.S. Geological Survey, 302 National Center
Reston, Virginia 20192

Phone: 703-648-4205
Fax: 703-648-4224
E-mail: nbii_program@nbii.gov

MetaMaker. MetaMaker follows the FGDC geospatial metadata standard by color-coding the "Mandatory," "Mandatory if Applicable," and "Optional" sections of the FGDC standard. Many of the fields have pick lists, some with required selections and others with lists of possible selections. Plus, users can build their own pick lists specific to their topics of interest. The program also contains a user manual, the FGDC content standard itself, the NBII biological profile, and the color-coded template. The user manual is available in several formats for downloading from the MetaMaker web site.

MetaMaker provides a metadata database that has built-in query functions and report output capabilities as well as import/export capabilities so field metadata can be consolidated. What's more, MetaMaker can output to the format required to enter metadata into the NSDI/NBII Clearinghouse, thus providing users with many options for managing, maintaining, updating, and distributing metadata.

The NBII MetaMaker program and user guide are provided free of charge over the Internet. To download your copy, just go to http://www.nbii.gov/metamaker/metamaker.html. A "readme.txt" file contains directions for extracting further files to complete the installation process onto your computer. Minimum hardware requirements for running NBII MetaMaker include a 486 IBM-compatible microcomputer and 18 MB of RAM. Although MetaMaker was developed and tested using Windows 3.1, it will also run under Windows 95.

Encouraging and facilitating the use of the MetaMaker tool as an important part of the NBII Program means that more existing biological data will be documented according to FGDC standards—and that more individuals and institutions interested in sharing, accessing, and using biological data will participate in the NBII/NSDI federation.